

REMARKS

The Office action of April 23, 2004 has been received and its contents carefully noted.

Claims 1-22 are pending in this application. Claims 1 and 9 have been amended. Claims 17-22 have been added without the addition of new matter.

Claims 1-4, 6-12, and 14-16 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over Horner et al. ("Horner") (U.S. Patent No. 5,357,544). Applicants respectfully traverse these rejections, and request allowance thereof in the pending application for the following reasons.

The Claims are Patentable Over the Cited References

Claims 1-4, 6-12, and 14-16 are not anticipated by Horner

Claims 1-4, 6-12, and 14-16 stand rejected under § 102(b) in view of Horner. Horner fails to disclose the features recited in these claims as amended such as demodulating a stereo composite signal including a pilot signal including sampling the stereo composite signal to obtain input samples, processing the input samples to obtain internal samples having variable sampling timings, generating a reference signal according to the variable sampling timings, and detecting a phase difference between the pilot signal and the reference signal using the internal samples.

As clearly illustrated in FIG. 2 and disclosed in corresponding portions of the Horner reference, Horner describes a

composite signal decoding device that generates input samples from analog-to-digital conversion (ADC) immediately before mixing the input samples with a reference signal. Due to this immediate mixing of the reference signal right after input sample generation, Horner expressly teaches solely generating a reference signal and detecting the phase difference between the reference signal and the pilot signal using these input samples just generated from the analog-to-digital converter (ADC) 18 rather than using internal samples as recited. (see FIG. 2; col. 2, lines 48-59). Particularly, Horner expressly teaches mixing the input samples from ADC 18 with a reference signal generated from a detected phase difference (between the reference signal and the pilot signal) using input samples from ADC 18 identified by the digital signal processor (DSP) 20 in contrast to processing the input samples to obtain internal samples and detecting the phase difference between the reference signal and the pilot signal (and generating the reference signal) using the internal samples.

Specifically, Horner describes "...receiving a composite signal including a pilot signal...the received composite signal is sampled at a preselected sampling frequency...the sampled composite signal is mixed with a reference signal of approximately the same frequency as the pilot...digital signal processor identifies the samples of the incoming signal from A to D converter 18 taken closest to the actual start of each pilot signal period...DSP 20 performs this task by adjusting the phase of the reference signal by iteratively

modifying the pointer to cosine table 28..." (see FIG. 2; col. 2, lines 44-51; col. 5, lines 16-23).

Horner does not obtain internal samples to detect the phase difference and generate the reference signal as recited, but instead uses the original input samples from the ADC 18 to detect the phase difference and generate the reference signal for mixing with the composite signal.

Horner fails to disclose the above-mentioned recited features of these claims making the claimed invention patentably distinct and non-obvious from the disclosed prior art.

New Claims 17-22 are not anticipated or made obvious by Horner

New claims 17-22 disclose features such as a first processor to generate internal samples from input samples using a variable internal sampling frequency, a detector to detect phase difference between the pilot signal and the reference signal using the internal samples, and a controller to vary the variable internal sampling frequency based on the detected phase difference, and further a machine-readable medium having stored thereon a plurality of executable instructions, the plurality of instructions comprising instructions to generate internal samples from input samples using a variable internal sampling frequency, detect phase difference between the pilot signal and the reference signal using the internal samples, and vary the variable internal sampling frequency based on a detected phase difference.

Similar to the above-mentioned arguments, Horner fails to disclose these recited features as in contrast Horner generates input samples immediately prior to mixing the input samples with a reference signal and therefore detects a phase difference and generates the reference signal using the input samples rather than using internal samples as recited.

Horner fails to disclose the above-mentioned recited features of these claims making these claims patentably distinct and non-obvious from the disclosed prior art.

Conclusion

In view of the amendments and remarks submitted above, it is respectfully submitted that all of the remaining claims are allowable and a Notice of Allowance is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayments to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

The Examiner is invited to contact the undersigned at (703) 205-8000 to discuss the application.

Respectfully submitted,

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Attachment: Letter Requesting Initialed PTO-1449 Form